

# ABSTRACT

A silica glass substrate is obtained by polishing,  
5 cleaning, drying and etching a silica glass substrate slice.  
When the substrate on one surface is treated with a reactive  
reagent, defects having a size of at least 0.3  $\mu\text{m}$  in a  
direction parallel to the substrate major surface are absent  
on the substrate surface. The silica glass substrate, in  
10 which no submicron defects manifest on the substrate surface  
even when treated as by cleaning or etching, serves as a  
reticle for use in photolithographic IC fabrication,  
achieving an improved manufacturing yield in the  
semiconductor device fabrication and microelectronic system  
15 fields.